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An investigation of
the beliefs, attitudes and practise
of health care workers
towards the use of oral morphine
in the palliative care management
of HIV/AIDS and cancer patients
in the Southern Region of Malawi

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Abbreviations

HIV	Human immunodeficiency virus
AIDS	Acquired Immune deficiency syndrome
WHO	World Health Organisation
ARV	Antiretroviral
INCB	International Narcotics Control Board
MST	Morphine sulphate (slow release) tablets
PEPFAR	Presidential Emergency Plan for AIDS relief
PLWA	People living with AIDS
CHAM	Christian Health Association of Malawi
DHO	District Health Officer
DMO	District Medical Officer
DDA	Dangerous Drugs Act
PC	Palliative care

Abstract

Background

Palliative care has been highlighted as an urgent need for patients with both HIV/AIDS and cancer in sub-Saharan Africa. Morphine is considered by the WHO as the drug of choice for severe pain in cancer. Pain is common in people with HIV/AIDS, though it is frequently unrecognised or poorly treated. Health workers' fears about morphine have been reported to be a barrier to patients' accessing necessary pain medication in studies from Africa as well as other parts of the world.

Methods

Semi-structured interviews were conducted with a total of fifteen nurses, clinicians, health service managers and pharmacy staff at five sites in the Southern Region of Malawi between November 2007 and February 2008. Study sites were randomly selected from groupings representing the different hospital institutions which exist in the region (district and central government institutions and mission hospitals). Interviews were conducted in either English or Chichewa. After translation, interview data was intensively reviewed by the researcher and emerging themes were identified.

Results

Three main themes were identified during the interviews. Firstly the availability of oral morphine, secondly concerns about opiate misuse and thirdly the need

for education and training amongst health workers and community members. Respondents understood that morphine was a strong pain killer, which they thought was useful and should be more widely available for patients with both HIV/AIDS and cancer related problems, though reported stock outs at their institutions were common. Oral morphine was available at only two of the institutions visited at the time of the interviews. A third of respondents were unable to supply information on correct practises for storage and reporting of morphine. Concerns were expressed about making oral morphine available to patients at home. Fears about addiction (either amongst patients or health workers) directly affected their prescribing practise, as respondents reported that they may either prescribe lower doses or only prescribe morphine late in the course of the illness to try to reduce the risk of addiction.

Conclusions and recommendations

Many of the health workers requested improved availability of oral morphine to treat patients with HIV/AIDS and cancer with severe pain. However other beliefs, attitudes and practises of health workers in the Southern Region of Malawi present major barriers to timely access to oral morphine for patients in need. Further education, training and hands on experience are required for health care workers (including pharmacy staff). Advocacy should be intensified at national and international level towards the development of appropriate policies and supply chains to improve the availability of morphine for medical purposes.

Introduction

“The medical use of narcotic drugs continues to be indispensable for the relief of pain and suffering and adequate provision must be made to ensure the availability of narcotic drugs for such purposes”¹

The above quote is taken from the United Nations Single Convention on Narcotic drugs which was adopted internationally in 1961 to ensure the safe and appropriate use of narcotic drugs. So why - almost half a century after such endorsements - should a recent press release state that ‘Africans die in pain because of fears of opiate addiction’?²

Palliative care has been highlighted as an urgent need for patients with both HIV/AIDS and cancer in sub-Saharan Africa^{3 4}. More recently palliative care has been put forward as a basic human right^{5 6}. Central to the WHO definition of palliative care is the ‘early identification and impeccable assessment and treatment of pain...’⁷. Morphine is recommended by the WHO as the drug of choice for severe pain in cancer. The WHO analgesic ladder, which was initially developed in the 1980s, has been shown to control pain in over seventy five per cent of patients with cancer⁸. These guidelines have now been recommended for pain management in other conditions including HIV/AIDS⁹. The production, processing and distribution of morphine is carefully controlled and regulated by the International Narcotics Control Board in collaboration with national governments in order to minimise the risk of diversion for use by drug addicts. A survey of palliative care users of oral morphine in India found no instances of misuse or diversion of opiates, despite the fears of the authorities¹⁰. The INCB, the World Health Assembly and other international bodies have noted that, whilst stringent controls are adhered to, the obligation

to promote access to opiates for medical purposes is often neglected. The Pain and Policy Studies Group (a WHO Collaborating Centre) was founded in 1996 with the aim of promoting appropriate availability of opioid analgesics for medical purposes¹¹, resulting in the WHO guidelines entitled 'Achieving Balance in National Opioids Control Policy' to help governments address relevant issues.

In 2002 it was estimated that around 24.6 million people were living with cancer around the globe, and 10.9 million new cases were diagnosed. Around 6.7 million people died from cancer in that year¹². It is estimated that between eighty eight and ninety five percent of patients with cancer in Africa present at a late or end stage of disease¹³, with trends suggesting that cancer incidence is rising rapidly. The London declaration on Cancer Control in Africa in 2007 stated that 'African countries will account for over a million cases of cancer per year'¹⁴ whilst resource and infrastructure challenges limit an appropriate response to this burden of disease.

Globally there were over 38 million people living with HIV at the end of 2005 and an estimated 2.8 million died of AIDS¹⁵. Pain occurs in adults and children with HIV as a result of a variety of factors: from HIV itself, from opportunistic infections and as a result of the side effects of ARV medication. As Grey and Berger wrote in a recent review article: 'despite a high prevalence of pain associated with HIV disease, pain is usually under-diagnosed and poorly treated'¹⁶. The WHO has stated that palliative care is 'an essential component of a comprehensive package of care for people living with HIV/AIDS as an important means of relieving symptoms that result in undue suffering and

frequent visits to the hospital or clinic'¹⁷. Some may argue that as access to ARV therapy is improving, palliative care is no longer required. Clinical experience and research suggest otherwise, with a study in Tanzania reporting that over fifty percent of seven hundred and thirty one patients presenting for HIV care had palliative care needs, and this in a setting where ARV therapy was readily available¹⁸.

There is now over four decades of clinical expertise and research in the modern hospice and palliative care movement, as well as increasing advocacy supported by a host of international agreements and research evidence. Despite all of this, statistics from the International Narcotics Control Board show that developing countries - with eighty percent of the world's population - consume only six percent of the world's supply of morphine¹⁹. In Africa advocacy for availability of pain relieving drugs has accelerated under the leadership of the African Palliative Care Association with the backing of several high profile international donors. As part of these advocacy efforts, APCA has hosted a series of regional drug availability workshops across the continent with country teams taking on the task of implementing the workplans they developed.

Malawi is a very low income country in Sub-Saharan Africa suffering under the combined effects of the HIV/AIDS epidemic and poverty, ranking 164 out of 177 on the Human Development index²⁰. Seventy six percent of the total population live on less than two dollars per day¹⁵, life expectancy is forty seven years²¹, and only seven percent of households have electricity²². Twelve percent of 15-49 year olds in a total population of around thirteen and a half million are

infected with HIV, and around sixty one thousand deaths per year are attributable to AIDS²³. There are multiple pressing priorities for limited health resources – under-five mortality was one hundred and thirty three per thousand live births between 2000-2004²² and the population suffers an estimated six million episodes of malaria annually²⁴. One hundred thousand adults and children are currently on antiretroviral therapy, with an ambitious goal to have started two hundred and forty five thousand patients by 2010²³.

Two thirds of health services in Malawi are government facilities (central hospitals in the four major cities, district hospitals in other towns, plus related health centres) under the Ministry of Health. The Christian Health Association of Malawi (CHAM) provides a further one quarter of all health services (mission hospitals and related health centres), with a variety of non-government organisations and private sector services operating sporadically²⁵. Fifty four percent of the population live more than five kilometres from their nearest health facility.²⁶

Malawi is split into three regions: north, central and south, with the highest population density and HIV rates in the southern region²⁷. Palliative care has been introduced over the last seven years, and there is increasing awareness of the benefits of providing good pain and symptom control for those with life threatening illnesses. At the regional drug availability workshop hosted by APCA in June 2006, a high level delegation from Malawi identified three key areas affecting morphine supply. Firstly the poor supply of liquid morphine, secondly poor data collection and reporting systems by health facilities and thirdly patients' limited accessibility to morphine. The attitudes, beliefs and

practise of health care workers play a critical role in these last two areas.

Investigation of these forms the basis of this study.

In Malawi, morphine is listed as a high priority, vital drug in the Essential Health Package Medicines and Supplies list²⁵. Between 1990 and 2007, the INCB received only one annual report on morphine use from Malawi²⁸. Following the inclusion of a chapter on palliative care in the Ministry of Health guidelines 'Management of HIV related Diseases' in 2004, morphine (as MST 10 mg tablets) has been supplied free of charge to all hospitals in Malawi which deliver antiretroviral drugs as part of a package of care and support funded through the Global Fund. Stocks and supplies of MST have been recorded quarterly at all hospital sites delivering antiretroviral treatment by supervision teams from the Ministry of Health HIV unit. National supply of MST has been out of stock from 2006 and – due to lack of adequate routine reporting to the INCB – further morphine could not be imported in 2007 as the national import quota ceiling had been reached. Oral morphine solution (an alternative and cheaper preparation of morphine) has also been available through the Lighthouse Trust in Lilongwe for use at a limited number of sites where palliative care teams have developed. Reporting to the INCB has been restarted as of 2007, with the Ministry of Health handing over its responsibility as the national statutory body to the Pharmacy, Medicines and Poisons Board (PMPB). As a result of completed returns and at the request of the PMPB the quota for morphine has recently been increased.

The Palliative Care Association of Malawi was registered in 2006. It has been working in partnership with the Ministry of Health to promote, develop and support access to affordable and culturally appropriate palliative care through

advocacy, training and technical support. As a result, a five day introductory training course for health care workers has been established. Around five hundred people have completed this training which includes modules on pain assessment, pain management, and the safe and appropriate use of morphine. However, there is as yet no official government policy relating to the provision of palliative care and a number of senior health advisors lack awareness on issues relating to palliative care.

Countrywide all health services are delivered against a background of a critical shortage of human resources, with 55% of nursing posts and 59% of posts for medical staff in Ministry of Health and CHAM facilities standing vacant last year²⁹. There is a higher concentration of the limited number of skilled staff working in urban central hospitals. A report in 2003 found that less than ten percent of hospitals had the capacity to deliver the Essential Health Package (comprising eleven key components of health care which should be available to all Malawians)²⁵. One of the main aims of the 2004-2010 government health plan is to increase human resource capacity, and this is being supported through the donor-funded Emergency Human Resource Programme. Enrolment of clinical officers has doubled and of medical students has tripled under this programme. In order to scale up access to morphine much of the work will- by necessity -have to be integrated into the daily workload of all clinical staff, rather than being delegated to dedicated palliative care teams.

Literature review

As long ago as 1986 the World Health Organisation produced guidelines for the safe and effective control of cancer related pain³⁰. Two years later Stjernsward reported field tests that showed use of these guidelines resulted in effective pain relief in over 80% of patients with cancer³¹. More recently this method of pain relief has been accepted for patients with HIV/AIDS⁹.

Outside of Africa studies on attitudes and beliefs about morphine use in a palliative setting focus on physicians rather than other cadres of health workers^{32 33}. Elliot and Elliot surveyed over two hundred physicians in North America reporting false beliefs and attitudes in the following areas: drug efficacy, tolerance and ignorance of the fact that oral morphine is not addictive when used in the management of chronic pain³⁴. A study comparing the attitudes of French HIV specialists with oncologists revealed that HIV specialists had more restrictive views both about the use of morphine and the role of palliative care than did French oncologists³⁵.

Studies from African settings have considered a variety of issues which constitute barriers to morphine access. The WHO five country study investigating the provision of palliative care in Botswana, Ethiopia, Tanzania, Zimbabwe and Uganda found that pain relief was identified by both patients and their family members as a major priority to improve quality of life for those with HIV/AIDS and cancer. That report proposed home based palliative care integrated into existing health services as the most practical way to meet needs identified in the community. The lack of availability of morphine in the home

setting was noted. Ignorance and false beliefs were mentioned as barriers to access of appropriate analgesia and other drugs, but these specific issues were not investigated in any further detail³⁶. Since the start of this study a comprehensive report on drug availability for palliative care in twelve African PEPFAR countries has been published by Kings College, London and the African Palliative Care Association³⁷. Thirty six palliative care provider sites were asked to respond to a number of questions about the factors affecting the availability of pain relieving drugs through completion of questionnaire. The background to the study lists 'fear of addiction amongst health workers' as one of the global barriers to opiate availability, a factor which was borne out in the reports from palliative care providers. However it was not within the scope of that study to specifically investigate the attitude of health care workers in any further detail. Lack of professional education with resulting prejudice, myths and poor prescribing have also been reported to hamper appropriate supply³⁸. Reports from APCA regional opioid availability workshops have highlighted limited availability of opioid medications, poor knowledge amongst health workers and fears of addiction amongst health workers and pharmacists³⁹.

Logie and Harding in their review of the expanded morphine access programme in Uganda highlight the roles nurses, pharmacists and doctors play in access to morphine⁴⁰. Palliative care trained nurses were interviewed; an audit of their practise was undertaken as well as a review of the resource implications of delivering of oral morphine to distant locations. Studies from other settings echo the key role that nurses play as patient advocates in assessment of pain relief⁴¹. The WHO five country study highlights the lack of medical staff in many African countries, anticipating that many aspects of palliative care will be delivered in the community by both family members and

community based volunteers. As for prescribing, doctors are reported to be the main cadre of staff currently allowed to prescribe morphine; though – following the Uganda model – the WHO report suggests the possibility of nurses as well as care givers being trained in aspects of morphine delivery to improve access in the many situations where the numbers of doctors are few. Such considerations are also outlined in other recent WHO papers on the subject.⁴²

The frequent fears of addiction expressed by health workers are not supported by evidence in the literature. In a recent letter to the Lancet, Nigel Sykes from St Christopher's Hospice in London calls for physicians to move on from their 'opiophobic' attitudes stating that the risk of iatrogenic addiction is less than 0.01%⁴³. Joransen, Ryan, Gilson and Dahl found that despite significant increases in the medical use of opiates across the United States between 1990 and 1996, this did not appear to contribute to any increase in reported opiate abuse⁴⁴. This is supported by Logie and Harding who reported no cases of opiate abuse in over ten years at Hospice Africa, Uganda⁴⁰. Glajchen highlights how poor understanding of the terms addiction, physical dependence and tolerance present barriers optimal opiate prescribing. . In her paper she reports that the National Federation of State Medical Boards defines addiction as 'psychological dependence on the use of substances for their psychic effects, characterised by compulsive use despite harm'. This is in contrast with physical dependence a phenomenon similar to that found with other long term medications e.g. corticosteroids which does occur with opiate medication⁴⁵.

There is a general lack of published research on palliative care in Africa³.

Review of the literature on health workers beliefs, attitudes and practise on the

use of oral morphine highlights papers mainly from outside Africa, focusing predominantly on physicians. Papers from Africa have suggested that false beliefs and lack of knowledge amongst a variety of cadres, as well as poor reporting systems, hamper access to morphine. With this in mind and in the light of the fact that oral preparations of morphine have recently been made available for pain relief throughout health institutions in Malawi, it is timely that the beliefs, attitudes and practise of frontline health workers in an African setting be investigated in order to target interventions which will enhance appropriate access to this medication for patients who are in need.

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Rationale

Pain control is a priority for people living with advanced life threatening illnesses. The World Health Organisation guidelines, shown to be effective for pain relief in cancer and HIV/AIDS patients, include the use of oral morphine for the relief of severe pain. Sustained Release (long acting) Morphine (MST) has been available in Malawi nationally since 2004 as part of the package of care for PLWAs supported by the Global Fund, though expertise in assessing pain, prescribing analgesia and follow up is still limited. Given the scale of the HIV/AIDS epidemic in Malawi, and the estimated growth in number of cases of cancer, scale up of access to palliative care (including appropriate prescribing of morphine) maybe considered a national emergency. In view of this it is critical at this time to assess the beliefs, attitudes and practices of health care workers towards the use of oral morphine in HIV/AIDS and cancer patients. This can then inform government and other relevant agencies when taking the necessary steps to improve access to palliative care including optimal pain relief enabling improved quality of life for those most in need.

Aim

To investigate the beliefs, attitudes and practices of health care workers towards the use of oral morphine for the palliative care management of patients with HIV/AIDS and cancer in the Southern Region of Malawi

Objectives

- To describe the beliefs, attitudes and practices of health care workers to the use of oral morphine in the palliative care management of HIV/AIDS and cancer patients in the Southern Region of Malawi
- To investigate whether there are differences in beliefs, attitudes and practice between clinicians, nurses and pharmacy staff in the Southern Region of Malawi to the use of oral morphine

Methods

Study design

This study was a qualitative descriptive study using thematic analysis.

Site

Interviews were conducted at each of the following types of health care facility in the Southern Region of Malawi:

1. central hospital (larger urban tertiary referral government centre, 465 beds offering free services to approximately 700 patients per day, staffed by 60 clinical staff and 117 nurses).
2. two district hospitals (smaller local government run hospitals, secondary referral centre, 200-300 beds, offering free services to approximately 200 patients per day, usually staffed by clinical officers or medical assistants and nurses)
3. two CHAM hospitals (smaller local hospitals, 200-250 beds administered by a variety of church denominations, offering subsidised cost sharing services to approximately 100-150 patients per day, staffed by doctors, clinical officers and nurses)

Sampling of study sites

Study sites were selected by random sampling. The names of all institutions which were listed by the Ministry of Health as being in the Southern region of Malawi and which had had MST supplied to them (verified through the Ministry of Health ARV supervision team reports) at any time since 2004 were written down, folded and put into envelopes. District hospitals and CHAM facilities

were put in separate envelopes and the names of two institutions were selected by an independent third party picking the names out of the envelopes. There are only two central hospital sites in the Southern region and as one had already been visited to conduct the pilot interviews the second one became the study site.

Participants

The following cadres of staff were requested to take part in interviews: health institution managers (district health officers or district medical officers), clinical officer/doctors, nurses, and pharmacy technicians who gave consent to participate in this study.

Sampling of participants

As understaffing is common at many health institutions, convenience sampling was used with the aim of selecting one respondent within each cadre at each institution. Health workers were approached as they were met at the institution, or else hospital management directed the research assistant to specific members of staff who had time to assist in the research. Any health worker who had been qualified for less than two years was excluded, to improve uniformity of experience.

Total sample size: 15. The relatively small sample size reflected the qualitative nature of the study, using semi-structured interviews to obtain in depth data from each respondent.

Data Collection

Data was collected by the use of semi-structured interviews.

Data collection tool

A semi-structured interview guide was initially drafted by the researcher, framing questions to cover issues relating to beliefs, attitudes and practise. Demographic data of respondents was included at the beginning to enable comparison between different cadres of health care worker. To improve validity of the interview guide it was revised and adjusted after advice and discussion with study supervisors. Open questioning with prompts were used to optimise quality of data collection whilst ensuring that key points were not missed. To improve reliability the interview guide was piloted on three different cadres of health care workers at one of the main referral hospitals in Malawi. It was then finally revised based on issues raised during the pilot. At various times during the process of data collection the researcher and research assistant met to review progress.

Data collection method

The interviews were undertaken by a clinical psychologist who is a lecturer in the Department of Community Health at the College of Medicine (Malawi's medical school). He is experienced in both qualitative and quantitative research methodology and is responsible for training a variety of staff and students in research ethics on a regular basis. He is fluent in both English and Chichewa. Interviews were conducted in English or Chichewa depending on the preference of the participant. Each interview took around thirty minutes to

complete. Content of each interview was recorded and field notes completed at the end of each day. Interviews were transcribed verbatim into English. Those from Chichewa were then back translated by an independent person to ensure validity of translation. Discrepancies were discussed by the research assistant and the independent translator and resolved.

Data Analysis

The researcher read and re-read the interview transcripts to familiarise herself with and become immersed in the data. Following this, key themes were identified. Data relevant to these key themes was then reviewed from each of the transcripts leading to the development of sub-themes. Ideas for themes and sub-themes were shared with supervisors, one of whom did an interim analysis of the transcripts, providing comments. Time and budget constraints did not allow complete saturation to be reached in data collection, though data analysis revealed a number of consistent themes. Notes from observations were used to correlate the data.

Ethical considerations

Ethical approval to conduct the study was obtained from the research ethics committee of the University of Cape Town and the College of Medicine research ethics committee (COMREC) at the University of Malawi.

All participants were fully informed of the nature of the study, and their participation was voluntary. Permission for participation of staff members at an

institution and time off required was sought by letter to the in-charge of the institutions involved.

Interviews were conducted in the language of preference of the respondent. All the information was collected and was kept in a secure place during field visits. Interview data was reviewed only by the research assistant, the researcher and project supervisors. On completion of the study the material will be kept in a secure place for seven years and then destroyed.

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Results

Summary of respondents

Table of respondents

	Job title	Profession time qualified	Study site	PC experience
R1	Hospital manager	Clinical officer	Central hospital	none
R2	Clinician	Clinical officer > 5 years	District hospital	Limited knowledge of PC
R3	Clinician	Doctor 2-5 years	CHAM hospital	none
R4	Hospital director	Doctor > 5 years	CHAM hospital	Some exposure
R5	clinician	Clinical officer > 5 years	CHAM hospital	none
R6	nurse	Enrolled nurse > 5 years	District hospital	none
R7	Hospital manager	Registered nurse > 5 years	District hospital	None
R8	nurse	Registered nurse	District hospital	none
R9	nurse	Nurse midwife technician > 5 years	CHAM hospital	None
R10	nurse	Registered nurse > 5 years	CHAM hospital	none
R11	Pharmacy worker	Pharmacy technician	Central hospital	none
R12	Pharmacy worker	Pharmacy technician > 5 years experience	District hospital	none
R13	Pharmacy in charge	Pharmacy technician	District hospital	None
R14	Pharmacy worker	Pharmacy attendant 2-5 years	CHAM hospital	none
R15	Pharmacy worker	Enrolled nurse > 5 years	CHAM hospital	none

No one who was approached refused to give consent and take part in the interview process.

In total 5 clinicians (2 doctors, 3 clinical officers; of whom 2 were hospital managers, 3 were from one institution), 6 nurses (2 registered, 4 enrolled, of whom one was a hospital manager) and 4 pharmacy staff (3 pharmacy technicians and 1 pharmacy assistant) were interviewed from five institutions: three government facilities (one central and two district) and two CHAM facilities

Analysis of fifteen semi-structured interviews with health workers from five different institutions in the Southern Region of Malawi yielded three main themes. The first theme focused around issues relating to the availability of morphine, the second theme related to concerns about opiate misuse and the third was around education and training needs. These were further broken down into sub-themes as noted in the table below:

Theme one	Theme two	Theme three
Availability of oral morphine	Concerns about Opiate misuse	Education and training
1.1 appropriate use of oral morphine	2.1 misuse amongst Patients	3.1 need for training of health workers
1.2 use of oral morphine in the community	2.2 misuse amongst health workers	3.2 need for training of community members and patients
1.3 storage, current stock and reporting of oral morphine		
1.4 cost of oral morphine		

Table of themes and sub-themes developed in data analysis

Theme one: Availability of morphine

1.1 Appropriate use of oral morphine

All of the health workers interviewed expressed the belief that oral morphine was a drug used in the treatment of pain, particularly for those who were chronically or terminally ill. One clinical officer reported:

'as we know those patients who are HIV infected most of the time go through severe pain. So they might need it' (R2).

A pharmacy assistant said:

'oral morphine is good for patients who are in severe pain especially our AIDS patients' (R13).

A number of respondents had a positive experience of using oral morphine to help patients in need. As one nurse manager said:

'I believe oral morphine is good. I know that morphine works better. If a person has severe pain that cannot be relieved by other painkillers, pain that is too strong for the patient, morphine does help. I am personally convinced that oral morphine is good for the patients' (R7).

All of those interviewed expressed the belief that oral morphine was appropriate for patients with both HIV/AIDS and cancer. As one nurse put it: *'Many patients can benefit from morphine. Those who are benefiting most are cancer patients as well as people with AIDS' (R9).*

A clinician commented:

‘they usually have a lot of pain especially when the cancer is invading some nerve endings...so if we make them comfortable it will be good rather than to keep them I mean in agony’ (R3).

Another commented:

‘AIDS patients are chronic cases...they experience chronic pain and oral morphine would assist them to have less pain’(R8).

She went on to say:

‘cancer is one of the chronic conditions and cancer patients are in big pain. They can benefit from morphine because usually there is nothing that can be done to cure them only to make their life less painful’(R8).

Diarrhoea was the only other reported indication for the use of morphine. *‘Many of the patient(s), many of them they have diarrhoea and with the use of morphine it may reduce’ (R4).*

1.2 Use of oral morphine in the community

Ten respondents discussed whether oral morphine should be available for patients in their home setting. Interview findings revealed two sets of attitudes, some health workers felt that morphine should be available to people at home whilst others expressed reservations about its use in the community.

A clinical officer at a government district hospital said:

‘when we are discharging the patients we give them oral morphine to take home’ (R2).

A manager from a district hospital said:

'it would be important for the medication to be available to all hospitals especially patients who are in severe pain at home' (R1)

Those who had reservations were mainly concerned about opiate misuse or side effects developing without the prescriber's knowledge. One clinical officer expressed his fear that patients may commit suicide:

' if you give them this drug to be kept by them at home my biggest concern is maybe they commit suicide because they would see their condition as something which is going to be keeping on...my worry would be they may commit suicide to ease the pain' (R5).

Another reported the need to keep close control over use of oral morphine in the community saying:

'you don't keep somebody (in hospital) because you want to give them morphine...so you say its okay you take these but you don't give them a lot...after a week also you can come by and get some just to control the usage' (R3).

A nurse who had experience of morphine at home reported no problems:

'I have administered oral morphine to several patients. Actually I am the HBC coordinator and our home based care patients receive morphine.'(R8).

However the nurse manager from the same institution said:

'so far...all the patients I know who were taking morphine, no one was given to take home'(R7).

A nurse from a different CHAM facility said:

'It (oral morphine) should be available even at their homes, they should be able to take the medicine home or even here at the hospital the process of collecting it should not be too tedious and difficult' (R9).

1.3 Storage, current stock and reporting of morphine

Nine of those interviewed were able to clearly express where and how oral morphine was kept. They explained the need for trained prescribers and the need to follow certain regulations for storage and record keeping according to the Dangerous Drugs Act (DDA).

'There are people who are trained to prescribe. Those people who were trained are the ones to prescribe' (R9).

'For this hospital not everybody prescribes oral morphine. There are specific prescribers.' (R13).

'Doctors and some trained clinical officers prescribe. It is kept as a DDA drug and its distribution is controlled'. (R1).

One pharmacy assistant reported:

'we have a lockable DDA it's raised up. It's always locked and we have got a DDA pad whereby we put the name of the patients and the quantity or the number of drugs we have dispensed to that particular patient and our balance' (R13).

Another pharmacy worker said:

'it is only doctors and some trained clinical officers who prescribe. It is one of the protected drugs. It is therefore kept as a DDA drug and its distribution is controlled.' (R11)

Others had no experience of the use of oral morphine. These people showed poorer reporting of the relevant storage and reporting procedures. One pharmacy worker said:

'I am not going to say anything much because I rarely see it (morphine) used' (R15).

At three sites it was reported to be kept in the pharmacy, at one in the maternity ward (oral morphine liquid) and at another MST tablets were in the ARV clinic. The place of storage seemed to affect availability as one person described:

'we used to get (it) only (in) one place... in (the) ARV(clinic) ...and we didn't have access for all the patients like for cancer patients (R4)'.

Although all five of the sites were chosen for interviews on the basis that they had at some time had oral morphine (MST tablets) available, at only two of the institutions did interviewees report availability at the time of the interviews. A pharmacist from a government central hospital reported:

'sometimes it's there but sometimes it is not available like right now we don't have it' (R11).

The nurse assisting in pharmacy at a CHAM facility said:

'now we don't have the drug' (R15).

Another pharmacy attendant said:

'it seems we don't have (morphine) at the moment, but some patients come looking for it'(R14)

At one institution there was some inconsistency in reporting. One pharmacist said:

'it's not used here. In fact it is not available (R12).'

A clinician from the same site on the same day reported:

'I have not come across a situation where I prescribe morphine and it is not available...since I came here I have not met the problem of morphine availability' (R2).

Many respondents expressed the desire for improved availability of oral morphine, a pharmacy worker who reported frequent experience of dispensing morphine said:

'my comment is the government should make sure this drug is always available at regional medical stores' (R13).

These sentiments were echoed in the comments of one clinician who said:

'you should try to make sure that this drug is readily available since this time we have a lot of cases of HIV/AIDS and cancer patients. It will be an advantage to those patients to have these drugs'(R2).

1.4 cost of oral morphine

A variety of health workers expressed the belief that morphine is an expensive drug and that this would affect its availability. One reported:

'it is expensive thus why sometimes it might not be available in the hospitals' (R13),

another said:

'I have never seen its price but I have heard that it is expensive' (R5).

In practise a number of respondents explained that their institution had received morphine free of charge as part of the package of drugs funded by the Global fund:

'since we had it for free I may not be a hundred per cent right to say it is expensive while it is not' (R5).

Theme two : concerns about opiate misuse

2.1 Misuse amongst patients

A range of respondents believed that the medical use of oral morphine would cause the problem of addiction, and also felt that this was a widely held and legitimate view. A clinician (also a hospital manager) said:

'the general thinking (is) that probably he is going to become addicted' (R4). A pharmacy assistant said:

'if it is prescribed anyhow, then many young patients would be addicted' (R12).

This belief also affected the attitudes and practise towards prescribing so that one nurse reported only prescribing for a short period:

'maybe it (addiction) could be a problem but because the patients we give morphine to are not given to take it for a long period. Sometimes its just seven days and its difficult to get addicted in that short period' (R7).

Another clinician reported prescribing at a late stage:

'most of my patient(s) when I start morphine I know that the chance of them being addicted is low because some of them are terminal...even if they came addicted when they are about to die it's ok'(R3).

One clinician was only confident to prescribe up to a certain dose:

'I may not feel comfortable to go beyond 30mg or something higher...the biggest concern would be morphine is a narcotic so if a patient get(s) a higher dose she might be addicted earlier than expected' (R5).

2.2 misuse amongst health workers

This fear was expressed by several of the interviewees. One pharmacy assistant said:

'the fear is sometimes it starts from the hospital, the staff, they really abuse it sometimes;' (R6)

though when asked more about any experience of problems related to addiction he said:

'I haven't experienced any. Either from the hospital or the prescribers I haven't heard any' (R6).

A clinician said *'there are some health workers they feel good when they take it...so the fear is abuse' (R3).*

Not all shared this view, as one nurse reported:

'I have never heard or seen that a health worker has abused morphine. Even when some has been kept in the ward for particular patients, there has never been an incident when the drug went missing' (R7).

Theme 3 : education and training

3.1 Need for training of health workers

3.1.1 Poor understanding of side effects

Though knowledge was not formally assessed in this study, all respondents were asked to give their comments on side effects which patients might experience when given oral morphine.

Of the fifteen interviewed most of the clinicians and one nurse reported constipation as a side effect:

. 'the main side effect is constipation...so we usually prescribe a laxative as well' (R3).

Other respondents reported they did not know of any side effects:

'I don't know of any side effects' (R7)

or else reported the following as possible side effects: respiratory depression, vomiting, weakness and severe headache.

'I have heard that when a patient receives morphine he will feel severe headache' (N15)

One elderly nurse working in the pharmacy at a CHAM facility said:

'it's a bad drug it can kill and even its side effect(s) are very dangerous' (R15)

though she did not mention anything specific. She had only ever dispensed sixty tablets (one month's supply) of morphine during her time working in the pharmacy. None of the other respondents expressed similar views to this.

3.1.2 Confusion with pethidine

Both when discussing pain relief and the problems of addiction, there was some evidence of confusion between pethidine and oral morphine. One clinician's report of addiction amongst health workers:

'he or she says its only going to work if you give me morphine so next time they come and you give them (an) injection which they think its pethidine they feel good so that is the issue'(R3).

Despite being asked about their concerns of oral morphine tablets or solution a nurse reported:

'I know several workers who are addicted; one is addicted to pethidine and the other valium'(R8)

One retired nurse who was doing locum work looked completely blank when asked what oral morphine was, she then asked if it was the same as pethidine (R6).

3.1.3 Expressed need for training

Clinicians interviewed expressed the need for further training of health workers.

One said:

'I feel it would be helpful if you gave us maybe some form of a talk or a course on what type of patients we should prescribe morphine (for). Each clinician here prescribes based on personal judgement' (R2).

Another said:

'most of the people do not get trained, especially when they are doing palliative care' (R5).

A hospital manager said:

'...training and teaching people how to use it and when to use it I think that way it is going to help the patients',

he finished by saying:

'we are inexperienced and need a lot of experience in the use of morphine in our patients' (R4).

3.2 Need for training of community members and patients

This was mentioned by a number of respondents, either as formal training or as the need for information giving whilst dispensing oral morphine. A nurse said:

'it will just be necessary to tell the patients to be more careful since its one of the dangerous drugs. So tell them not to give to any other person apart from themselves' (R9).

A hospital manager said:

'they need to come (and) teach the family or the guardian how really to look at the side effect(s)'(R4).

On the need for training community home based care volunteers on oral morphine one clinician said:

'I may not be comfortable (to allow morphine to be used at home) because some of those may not be trained on the drugs so a drug like morphine I don't think I might be comfortable to let it go to the home based patients' (R5).

Discussion

Effective pain relief has been identified by patients and their families as a main priority to improve their quality of life⁹, and this priority is central to the definition of palliative care. Oral morphine is recommended by the WHO as 'the drug of choice for severe pain in cancer'³⁰ and has more recently been recommended for pain relief in patients with HIV/AIDS⁹. A number of barriers to the effective delivery of morphine exist, amongst which the beliefs, attitudes and practises of health workers have previously been suggested to be significant.

Other studies have employed interviews with specific cadres of staff (e.g. nurses) already working or trained specifically in palliative care. This is the first study to conduct face to face interviews with different cadres of African health care workers to assess their beliefs, attitudes and practises regarding the use of oral morphine in HIV/AIDS and cancer patients. Care for patients with HIV/AIDS and cancer forms much of the daily workload at government and CHAM facilities in Malawi. In the light of the severe shortage of human resource in Malawi, the respondents represent cadres who are going to make a difference as to whether or not oral morphine medication is safely and appropriately prescribed for those with HIV/AIDS and cancer presenting to health services. It was important that all cadres were interviewed, since it is not only prescribing, but also dispensing and administration that may present barriers to patients' access⁴⁰. Clinical practise at my own institution has shown how pharmacy workers play a key role in the supply chain. Pharmacies have a heavy workload and are understaffed. As a controlled drug, oral morphine must be correctly dispensed and recorded each time it is prescribed. On occasions patients have been sent back with the report that oral morphine is out of stock, only to find it was available when they were subsequently accompanied by one

of our team members. This situation improved after a sensitisation meeting for pharmacy staff on palliative care and the use of oral morphine (and other medications) for pain and symptom control. This example is echoed by Logie and Harding in Uganda who found that experienced palliative care 'nurses felt that having a pharmacist with a positive attitude to morphine use was key to obtaining uninterrupted supplies' ⁴⁰

Three main themes were identified in the results. Firstly health workers highlighted appropriate use, use in the community, storage, reporting and cost of oral morphine.

Most knew about the primary indication of morphine in the treatment of severe pain, and were equally confident about its use for patients with either HIV/AIDS, cancer or both. As Kaposi's sarcoma – an AIDS related cancer - is the commonest cancer seen in clinical practise in Malawi⁴⁶ this is perhaps not surprising, also given the fact that HIV/AIDS and cancer services are not delivered by specialists in Malawi but are part of general medical care. This contrasts with a study from more specialised services in France which found that HIV clinicians and oncologists differ in their attitudes to the use of morphine and palliative care³⁵.

Some clinicians and nurses expressed concerns about where morphine should be available, specifically whether it was safe to give to patients to take at home. Concerns focused around the possibility of addiction, developing side effects or even committing suicide without appropriate backup. One district hospital where staff reported regular use of morphine both at hospital and at home

expressed no such doubts, suggesting that some fears maybe fuelled by lack of experience.

The Uganda model of public health expansion to improve access to morphine has shown that oral morphine can be safely and effectively delivered at community level⁴⁰. Learning from this experience is critical considering that the vast majority of the population of Malawi live in rural areas, often far away from their nearest health facility. In my experience of six years doing HIV palliative care at a government central teaching hospital in Malawi many patients present with already advanced disease. Mobility and/or money for necessary transport to hospital already limits access to care, and repeated visits to hospital are difficult or impossible. Once pain has been controlled patients must be able to travel home with adequate supplies of oral morphine (and/or other medications). Out-patient follow up should ideally be situated as near as possible to their home setting for holistic symptom review, administration of necessary medications and other interventions. Provision should also be made for adequate pain assessment and effective pain control to begin in the home setting for those unable to reach the health facility. It is vital that health workers have both experience with and confidence in the safe use of morphine in the home setting in order to develop the 'low cost, high coverage approach' recommended by the WHO five country study⁹.

In 2006, the Malawi delegation at the APCA Regional Advocacy workshop for Palliative Care in Africa identified poor data collection and reporting systems by health facilities and stock outs of essential drugs as problems to be addressed as part of a national pain medication advocacy strategy. This study revealed

that a third of those interviewed were unable to supply information on the correct practises for storage and reporting of morphine at their facility. Poor knowledge of reporting corresponded to study sites where oral morphine was not available and/or respondents who had a lack of experience of morphine use. Only two hospitals reported that MST was available at the time the interviews were conducted, although the health facilities visited were chosen on the basis that they have had morphine sulphate tablets supplied at some time since 2004. Review of the quarterly reports from the Ministry of Health supervision teams confirmed the reported stock outs revealing that one study site last had MST in stock in the first quarter of 2006, whilst another had recorded very limited stock (less than 100 tablets) since the end of the second quarter of that year (Professor Tony Harries, personal communication). Stock outs of all pain relief medication recommended in the WHO analgesic ladder (including adjuvant analgesia) was a common finding in the Kings College/APCA report on pain relief availability in twelve African PEPFAR countries³⁷.

In this study there was also a lack of consistency in reported availability at one study site where the pharmacy worker reported that there was no morphine available, whereas the clinician reported 'no problem' with morphine availability. This may reflect the lack of consistent policies and guidelines regarding opiates, or the fact that the clinician never prescribed morphine (hence there was 'no problem'!). The pharmacist from another study site reported a regular (daily) practise of reporting on drug availability (including morphine) to senior staff, and there was a notable confidence in prescribing attitude from all who were interviewed at this facility. The MOH quarterly reports show progressive

steady decrease in stock of MST at this institution between mid 2005 and the third quarter of 2007 (the last available report) which is consistent with their reported experience in prescribing, administration and dispensing of MST . Interview data from this study site may also have been influenced by the fact that both the nurses interviewed were registered nurses (two of only three registered nurse respondents in the study), and the pharmacy technician was in an older age bracket (therefore possibly more experienced) than the pharmacy staff from other study sites.

Cost was mentioned by some respondents, and this has also been raised as a concern to the researcher by medical students during palliative care teaching sessions. Careful consideration of the use of limited resources for health care is a key concern in Malawi. If health workers believe that oral morphine is expensive they may be less willing to use it. Though not yet widely available in Malawi, oral morphine liquid is the cheapest formulation of morphine available⁴⁷. Senior staff from Hospice Africa Uganda have reported that they can treat a patient with oral morphine liquid for two weeks for the same cost as a price of a loaf of bread (Dr Anne Merriman, personal communication). At a national advocacy workshop hosted by the Palliative Care Association of Malawi and the Ministry of Health in February 2008 it was recommended that both oral morphine liquid and morphine tablets should be available at all health institutions in Malawi. Morphine slow release tablets are considerably more expensive than morphine liquid. They are procured through Global Fund procedures. Both tablet and liquid formulations of morphine are listed in the Essential Health Package medicine and supplies list for Malawi ²⁵.

Concerns about opiate misuse have been widely reported in previous studies as a belief amongst health workers^{36-40,43,45}. This presents a huge barrier to patients accessing oral morphine. In this study two groups were considered by respondents to be at risk of opiate abuse, firstly patients and secondly health workers. The majority of respondents expressed concerns about addiction in either or both of these groups. Those reporting frequent experience of prescribing morphine were less likely to express the attitude that patients were at risk of addiction. None of those interviewed were able to report or recall any actual cases of addiction to oral morphine to support their fears. This is reflected in the literature which reports negligible or no opiate abuse or diversion when opiates are made available for palliative care patients followed up in both African and other settings^{10, 39, 43, 44 48}.

Concerns about addiction directly impacted on both prescribing practise and administration of morphine. Respondents suggested that either reducing the dosage or the duration of oral morphine may reduce the risk of addiction. One clinician suggested that morphine may be started when the patient didn't have long to live at which stage the risk of addiction would be less of a concern.

Such beliefs severely limit efficacious analgesic prescribing;

'Strong opioids exist to be given, not merely to be withheld; their use should be dictated by therapeutic need and response, not by brevity of prognosis.'⁴⁹ At the heart of the WHO definition of palliative care is the stated aim to prevent and relieve suffering by 'the early identification and impeccable assessment of pain and other symptoms...'⁷. Malawi has no government funded adult oncology services (either for chemotherapy or radiotherapy), and the mainstay of management for patients with cancer from the time of diagnosis requires a

palliative approach with optimal pain and symptom control. Pain relief in patients with HIV/AIDS is often underdiagnosed and treated⁵⁰. According to the WHO analgesic ladder medication should be given 'by mouth, by the clock and by the ladder' with dose titration upwards until pain is adequately controlled⁵¹. Between January and December 2006 fifty one percent of two hundred and twenty eight patients referred to our HIV palliative care service received oral morphine to control pain or other symptoms⁵². Physical dependence to opiates may occur (i.e. the necessity for continued use of morphine to control symptoms) but this is true of other medications (e.g. antihypertensives). Such dependence should not be confused with the psychological craving which characterizes addiction.

The WHO public health strategy for palliative care emphasises that education at all levels is required to scale up a national palliative care response⁴⁷.

Respondents expressed the belief that training was required, both for health workers and for patients, their carers and community members. Mostly this training was believed to be required to optimise the safe use of opiates, though improving knowledge at community level may also increase appropriate demand for medication.

Only three of the respondents reported 'some' or 'limited' experience of palliative care, whilst the rest reported no experience of palliative care when demographic information was being collated. Although progress has been made in establishing a five day introductory course in palliative care for health workers, there is clearly a need to scale up training, both through this course and also through inclusion of an evidenced based palliative care component in

pre-service training curricular. The need to improve the breadth and depth of palliative care training for HIV/AIDS care providers was recommended by the Kings College/APCA research collaborative following their assessment of pain relief across twelve countries in Africa³⁷.

All the facilities visited were known to have had MST available for the control of severe chronic pain, though high turnover of staff may explain why some of the respondents reported no experience in the use of oral morphine. Knowledge about side effects of morphine were patchy and generally poor, particularly amongst nurses and pharmacy workers. Some were incorrect (e.g. severe headache). On a number of occasions beliefs about morphine and pethidine were expressed interchangeably. When asked about fears of using oral morphine a number of respondents expressed concerns about addiction to pethidine. A report prepared by the Pain and Policy Studies Group for the APCA Regional Advocacy workshop for Palliative care in Africa mentions that pethidine is still widely used despite the fact that it is no longer recommended²⁸.

Training on issues relating to palliative care at community level in Malawi have largely been delivered through home based care programmes monitored by the Nursing Section at the Ministry of Health. National policies and guidelines for home based care in Malawi have been in place since 2005, and home based care forms one of eleven components of the Essential Health Package outlined in the Joint Programme of Work for 2004-2010 by the Ministry of Health²⁵.

Review of the home based care policy document reveals mention of the need for 'palliative care including psychosocial and spiritual care' but does not specifically emphasise the need for adequate pain relief as part of the package

of services for community care⁵³. Only step one analgesics (of the WHO three step analgesic ladder³⁰) - paracetamol, aspirin and diclofenac, are listed for inclusion in the home based care supervisor's kit. This reflects the fact that much of the development of home based care training, provision and supervision in Malawi was led by health workers unfamiliar with the definition of palliative care, including the requirement for adequate pain and symptom control. This is changing. Senior pharmacy, nursing and clinical representation on the Malawi delegation to the APCA Regional Drug Availability Workshop, has been followed up by advocacy by the Palliative Care Association of Malawi. Senior nursing staff from the Ministry of Health are also enrolled on distance learning courses such as the Distance Learning Diploma offered by Hospice Africa Uganda.

Review of community based services in other African countries also highlighted the problem of limited access to oral morphine through home based care programmes. The executive summary of the WHO five country study states 'one of the major hindrances to the provision of palliative care in this region is the problem of access to medicines, especially opiates for the relief of pain⁹'. This report recommends the development of suitable training for community members and family caregivers to optimise outcomes. The need to expand home based care training to incorporate suitable training on pain and symptom control has been accepted by the Ministry of Health in Malawi and it is working in collaboration with the Palliative Care Association of Malawi in order to achieve this.

The second objective of the study sought to establish whether there were any differences seen between the different cadres? The sample size was too small to clearly determine differences, however all respondents expressed concerns about the possibility of addiction. Pharmacy staff were less likely to raise concerns about the use of morphine in the community. They were less able than clinicians to report the common side effects of oral morphine. Only one nurse correctly reported the side effects of oral morphine. Clinicians more commonly expressed the attitude that there was a need for training of health workers as well as patients, family members and the community. Those (from any cadre) who reported experience in using oral morphine generally expressed a more positive attitude to its use and the need for its greater availability.

Limitations of the study

During this study the identification of respondents was not easy. Unreliable infrastructure hampered planning: Study sites could not be reached by phone, only one of the facilities had access to e-mail and postal services are unreliable. Travel to the study sites was sometimes difficult especially as it was the rainy season. Such challenges to undertaking research in Africa have previously been recognised⁵⁴. Added to this – and despite repeat visits - a general shortage of health workers meant that it was often difficult to identify staff available for interview once we were at the study site and had gained permission from hospital management. Out of fifteen respondents only eight were at a professional grade (i.e. clinical officer, doctor or registered nurse level), which reflects the reality of the human resource situation in the country.

It was also noted that the quality of interview data recorded improved as the study proceeded despite conducting pilot interviews. The research assistant was very experienced in qualitative research methodology but was not conversant with issues relating to the use of oral morphine. He raised concerns about morphine addiction during the briefing before the start of the interviews but as time went on he learnt more about oral morphine and explored issues raised in more detail. He commented at the end of the study that he had enjoyed learning more about palliative care and the use of oral morphine during the course of his involvement with the study. It was necessary to use an independent research assistant so as not to bias the comments of respondents who may have tried to please the researcher who is known to be involved in palliative care. The researcher travelled with the research assistant to the study sites but did not take part during the interviews.

Conclusion

This study investigates the beliefs, attitudes and practises of a variety of cadres of health workers towards the use of oral morphine in the palliative care management of patients with HIV/AIDS and cancer in the southern region of Malawi. Previous literature has suggested that health workers fear addiction, lack training and are not conversant with adequate reporting systems when using oral morphine. These suggestions are supported by the findings of this study.

All of the respondents understood that morphine was a pain relieving drug, and expressed the belief that it should be more widely available for patients with both HIV/AIDS and cancer related problems. However, other beliefs, attitudes and practises present major barriers to timely access to oral morphine for the treatment of pain.

Despite the fact that wider medical availability of opiates has not been found to significantly influence opiate addiction⁴⁴, there was widespread fear that patients and/or health workers may become addicted to oral morphine. No respondents had any evidence to support this fear. Fears of oral morphine addiction were confounded by confusion between oral morphine and pethidine (which is no longer recommended for the control of chronic pain). Fears led to attitudes seeking to restrict oral morphine use in the community and to poor prescribing practise. Respondents believed that either short prescriptions or limiting the dose prescribed could reduce the risk of addiction. Such practises

are at odds with standard teaching in the assessment and management of pain taught in palliative care⁴⁹.

A third of respondents were unable to clearly describe the proper storage and reporting practises required when prescribing oral morphine, a finding exacerbated by lack of experience in handling oral morphine. Stock outs of oral morphine were reported (and confirmed by Ministry of Health reports) at three of the five study sites. Respondents also identified the need for training of health workers, patients, family and community members. Owing to the small sample size it was not possible to determine differences in the beliefs, attitudes and practises of the different cadres of respondents.

Recommendations

Timely response to the issues raised in this study is required if the long term needs of patients and their families affected by HIV/AIDS and cancer are to be met. Palliative care aims to improve the quality of life for such patients and their families and the use of oral morphine to control severe pain is integral to this.

At an international level support is required for the ongoing advocacy work of organisations such as the Pain and Policy studies group of the University of Wisconsin and the African Palliative Care Association. The appointment of Pain Policy fellows for Africa is key to this process, as they aim to improve the availability of opiate analgesics for pain management.

Education is required to inform the practise of prescribing, administration and dispensing of oral morphine. It should cover issues of pain assessment and management, as well as tackling strongly held beliefs about of the risk of addiction to oral morphine. To ensure coverage, palliative care modules should be integrated into the curriculae of all pre-service training institutions for health care workers as well as into existing home based care training curriculae for community care providers. Established palliative care services should offer attachments to health workers, providing experience in the practical handling of oral morphine.

Education and training should be linked to the development of appropriate guidelines and policies on issues relating to palliative care and the use of oral morphine. Policy implementation should be monitored and evaluated. At institutional level clear protocols should be established for the use of oral morphine (including assessment, prescribing and reporting) reflecting current national clinical guidelines and legislation. All new and existing staff should be briefed on these protocols.

A country-wide assessment of the knowledge, attitudes, beliefs and practise of health workers and managers of health institutions should be undertaken to target appropriate interventions to each cadre. More objective tools should be developed for assessing the practise of health care workers to assist with a rigorous country-wide assessment. Undertaking a situational analysis of palliative care needs in Malawi will help to guide the Ministry of Health, working in partnership with the Palliative Care Association of Malawi and other key stakeholders, as develops an appropriate response.

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Appendix 1

Title of study: An investigation of the beliefs, attitudes and practise of health care workers towards the use of oral morphine in the palliative care management of patients in Malawi

Information for managers of institutions in which interviews will take place

Thank you for taking time to read this important information. Please ask for further information should you have any questions.

Health care workers (clinical officers, doctors, nurses and pharmacy workers) from your institution are being requested to be interviewed on the subject of use of oral morphine for HIV/AIDS and cancer patients in Malawi. The research is investigating the attitudes, beliefs and practises of health workers in Malawi towards the use of oral morphine in HIV/AIDS and cancer patients.

The research project involves a single interview per participant. It is estimated that the interview will take 30 minutes to complete. There will be no further requirements after this has taken place. No financial cost will be involved. All information is treated as confidential and any reporting will be made anonymous.

The results will be analysed and presented to gatherings of health professionals, but no individual taking part in this project will be identifiable from the results. Please let the researcher know if you are interested to receive information about the findings of this research.

Many thanks

Yours faithfully,

Dr M Jane Bates
Principle Investigator

(For M Phil Palliative Medicine, University of Cape Town)

I _____ (please print your name)

Of

(please write name of your institution)

Confirm that I have read and understand the information above.

I agree that this site may be used as a study centre for this research project

Signed _____

Date _____

University of Cape Town

Appendix 2

Title of study: An investigation of the beliefs, attitudes and practise of health care workers towards the use of oral morphine in the palliative care management of HIV/AIDS and cancer patients in Malawi

INFORMATION FOR PARTICIPANTS

You are being asked to take part in a research study. Before you decide it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully. Talk to others about the study if you wish. After reading the following information, please feel free to ask anything to be explained that you do not clearly understand.

Purpose of the study

The purpose of the study is to investigate the beliefs, attitudes and practise of variety of health care workers towards the use of oral morphine in HIV/AIDS and cancer patients in Malawi.

Why have I been chosen?

You have been chosen as a category of health worker at your institution. Institutions in the Southern region of Malawi have been selected on the basis of oral morphine availability. At each institution the following cadres of health workers are being asked to participate in an interview which will record their beliefs, attitudes and practise of oral morphine use. Cadres include nurses, pharmacy workers, clinical staff (either clinical officers or doctors) and hospital managers.

Do I have to take part?

No. It is up to you to decide whether or not you want to take part. If you do, you will be given this information sheet to keep and asked to sign a consent form. You are free to withdraw at any time and without giving a reason.

What will happen to me if I agree to take part?

You will be interviewed by an independent researcher at your work place. Interviews will last 30 minutes. With your consent the interview will be tape recorded and transcribed verbatim (i.e. written out word for word) in order to enable a detailed qualitative analysis. Verbatim quotation will be used in publications but will be anonymised so that participants will not be identifiable. The content of the interviews will inform the design of a larger survey in a subsequent research phase.

Expenses and payments

No financial cost will be involved, and no payment will be made for taking part in this research.

Further information

Further information about this study can be received from the research project lead Dr Jane Bates under the contact details provided below. These details can also be used to raise any concerns during the study.

This research study has been developed taking into consideration the requirements of the Helsinki Declaration.

Dr M Jane Bates
Department of Medicine
College of Medicine
P/Bag 360
Chichiri, Blantyre 3
Malawi

Tel : 01870202

UCT Research Ethics Committee:
Faculty of Health Sciences
Research Ethics Committee
E52- 23 Old Main Building, Groote Schuur Hospital, Observatory ,7925
Tel: 27 21 4066492 Fax: 27 21 4066411

Appendix 3

CONSENT FORM

Title of study: An investigation of the beliefs, attitudes and practise of health care workers towards the use of oral morphine in the palliative care management of HIV/AIDS and cancer patients in Malawi

		Please initial box
1	I confirm that I have read and understand the information sheet for participants. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily in a language I understand	
2	I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason, without my work, career or legal rights being affected	
3	I consent that the interview is tape recorded and transcribed word for word with the possible use of word for word – but fully anonymised – quotation in reports and publications	
4	I consent that the demographic data provided may be used to analyse the qualitative data from the interview but won't be used to identify me as a participant in this study	
5	I agree to take part in the above study	

Name of participant

date

signature

Research assistant

date

signature

study number ____/____

Appendix 4

Interview framework for the investigation of the knowledge, beliefs, attitudes of health care workers towards the use of oral morphine in HIV/AIDS and cancer patients in Malawi

Interviewer initials _____

Date of interview conducted ___ / ___ / 07

Place of interview _____

Interviewee details (complete/circle as appropriate)

Job title _____

Place of work _____ CHAM Central District

Age <30 30-45 45-60 over 60

Number of years qualified <2 (exclude) 2-5 years >5 years

Sex M F

Nationality Malawian Other _____

Highest professional qualification

MBChB (or equivalent) Dip Clinical Medicine (or equivalent)

Community enrolled nurse Enrolled nurse Registered nurse

Pharmacy technician

Other (please state) _____

Palliative care experience

- a) None
- b) limited knowledge (e.g. lunchtime meeting or other)
- c) member of palliative care team
- d) completed 5-day training in palliative care
- e) completed higher qualification in palliative care
- f) other (please state) _____

Semi-structured interview guide

Tell me about the use of oral morphine at your institution.
(to include who prescribes, how drugs are stored, what procedures are followed in the reporting of morphine use)

Have you ever prescribed/dispensed/administered oral morphine (either MST tablets or oral morphine solution) for a patient?

Which patients might benefit from oral morphine?

Do you think morphine is a useful drug for patients with HIV/AIDS in Malawi?

Do you think morphine is a useful drug for patients with cancer in Malawi?

What are the side effects that patients might experience when taking these medications

Do you feel confident in prescribing/dispensing/administering oral morphine to patients with HIV/AIDS?

Do you feel confident in prescribing/dispensing/administering oral morphine to patients with cancer?

Do you feel confident in prescribing/dispensing/administering oral morphine to patients with other conditions?

study number ____/____

Do you think oral morphine tablets and/or liquid should be more readily available to your patients?

Why or why not?

What concerns or fears do you have about the use of oral morphine tablets or solution in HIV/AIDS and cancer patients?

(If not mentioned should specifically ask 'Do you think it is an expensive drug?' and 'what about addiction'))

Do you have any other comments you would like to make relating to the use of oral morphine in HIV/AIDS and cancer patients in Malawi?

Thank you for taking part in this research project

study number ____/____